DPS Telecom

"Your Partners in Network Alarm Management"

T/KdaW

USER MANUAL

For Microsoft™ Windows 95™, Windows 98™, and Windows NT™

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T/KdaW

for Microsoft¤ Windows¤ 95
Microsoft¤ Windows¤ 98
and Windows¤ NT

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Quick Start

QUICK START

How to Set Up a New KDA

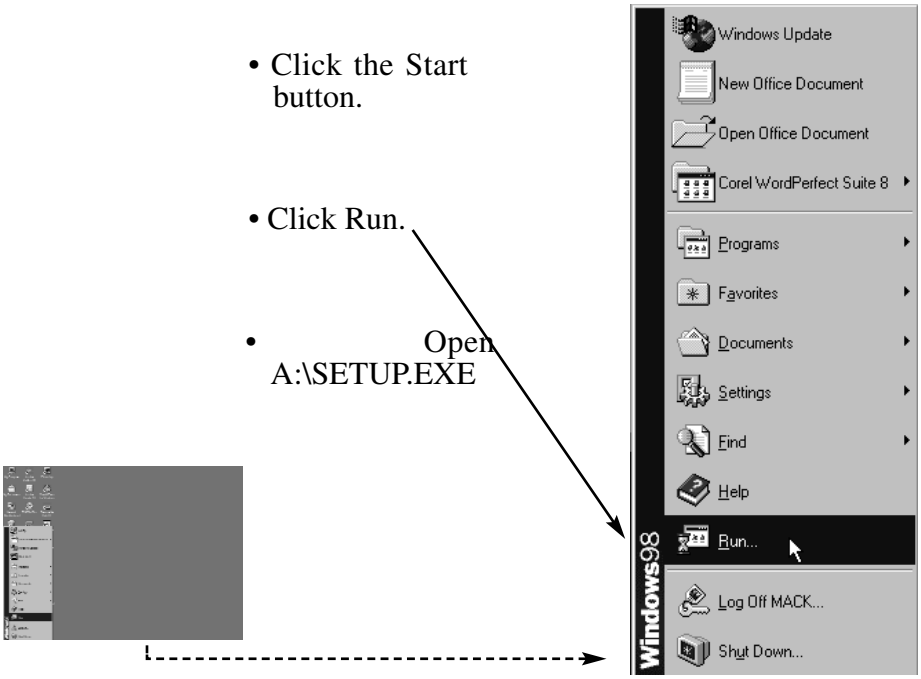
Install T/KdaW

• Place the T/KdaW disk in the A: drive.

• Click the Start button.

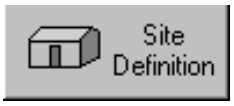
• Click Run.

• Open A:\SETUP.EXE



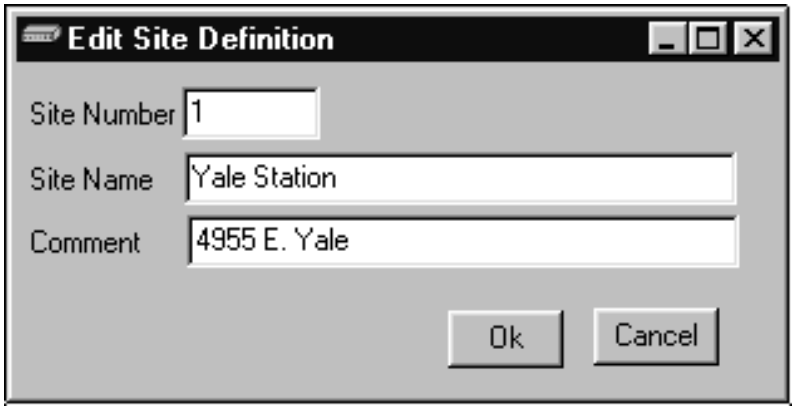
• The Installshield wizard will run. Follow the instructions on the screen.

• Installation package may also be received via email or internet, in which case it would usually be downloaded to your hard drive as a single file named SETUP.EXE. Run or click on it to install.



Select Site Definition

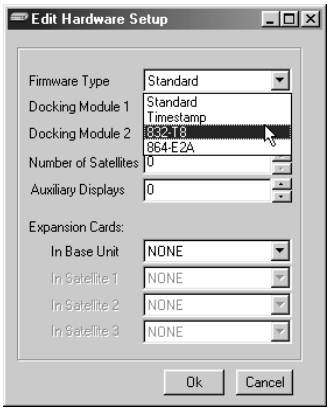
- Enter a **Site Number** (1-9999999) to identify the source of alarms.
- Enter a **Site Name**, or location of the KDA, ranging from 1-25 characters.
- The optional **Comment** dialog box can be used for any useful descriptive information up to 30 characters.
- Click **Ok**.

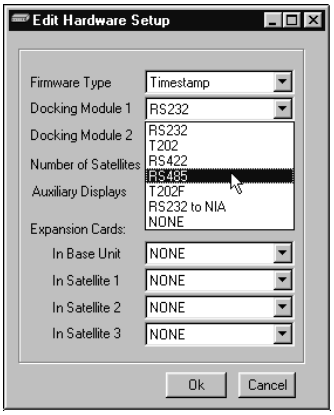


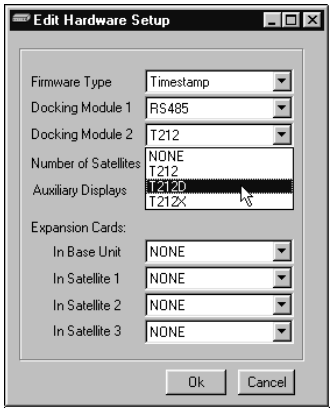
Select Hardware Setup

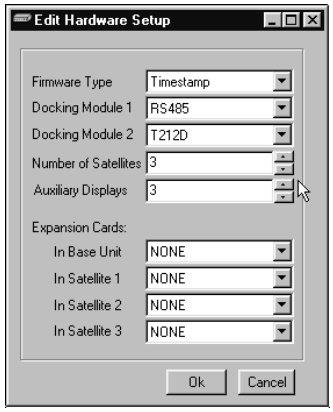
- Select the Firmware Type: **Standard**, **Timestamp, 864-E2A,** or **832-T8.**
- Select communications modules installed for **Docking Module 1** and **Docking Module 2.**
- Select **Number of Satellites** installed.
- Select **Number of Auxiliary Displays** installed.
- Select any **Expansion Cards** installed in the base and each satellite.
- Click **Ok**.

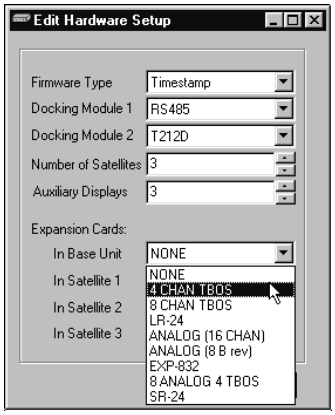
Important:
hardware setup must be defined before going on to the docking ports, base and satellite entries. This also must be done before uploading a KDA.





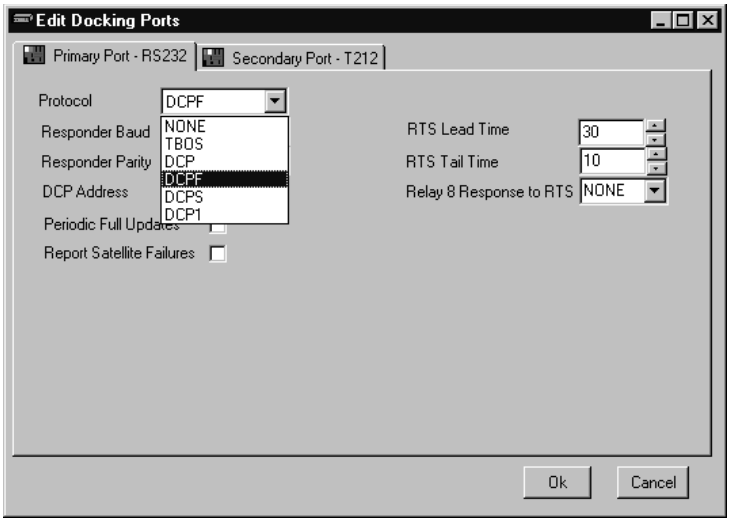




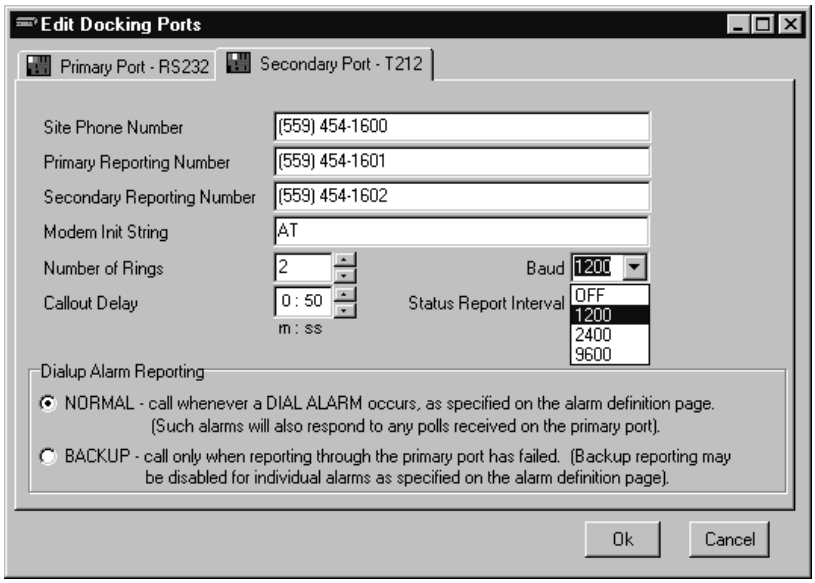


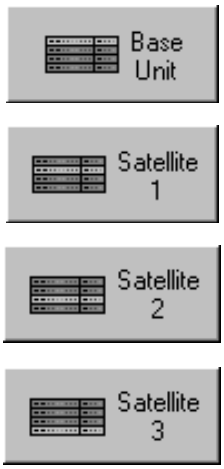
Select Docking Ports

- Choose the Primary Port tab.
- Select the protocol to be used on the primary port.
- Set the fields to the appropriate settings.
- Click **Ok**.



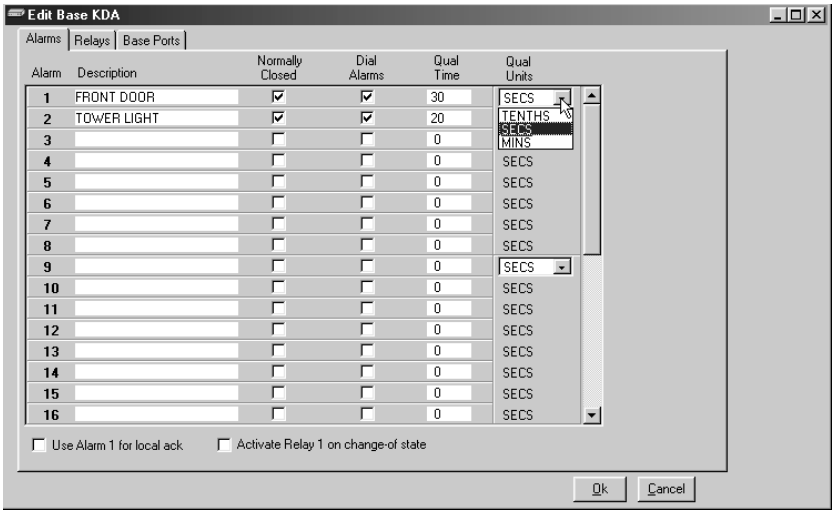
- Choose the Secondary Port tab.
- **Site Phone Number** requests the phone number to be dialed to call into the KDA.
- **Primary Reporting Number** requests the primary phone number the KDA should call to report alarms.
- **Secondary Reporting Number** requests an alternate phone number the KDA should call to report alarms.
- Choose a **Dialup Alarm Reporting** option.
- Click **Ok**.


Edit Docking Ports
Primary Port - RS232
Secondary Port - T212
Site Phone Number
(559) 454-1600
Primary Reporting Number
(559) 454-1601
Secondary Reporting Number
(559) 454-1602
Modem Init String
AT
Number of Rings
2
Baud
1200
Callout Delay
0 : 50
m : ss
Status Report Interval
OFF
1200
2400
9600
Dialup Alarm Reporting
NORMAL - call whenever a DIAL ALARM occurs, as specified on the alarm definition page. (Such alarms will also respond to any polls received on the primary port).
BACKUP - call only when reporting through the primary port has failed. (Backup reporting may be disabled for individual alarms as specified on the alarm definition page).
Ok
Cancel



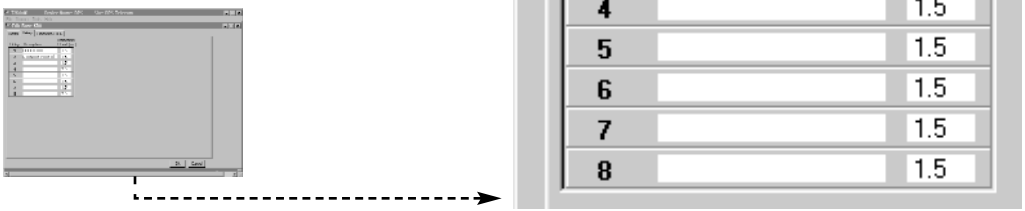
Select Base Unit and/or **Satellites**

- Enter alarms and specifications.
- Click **Ok**.

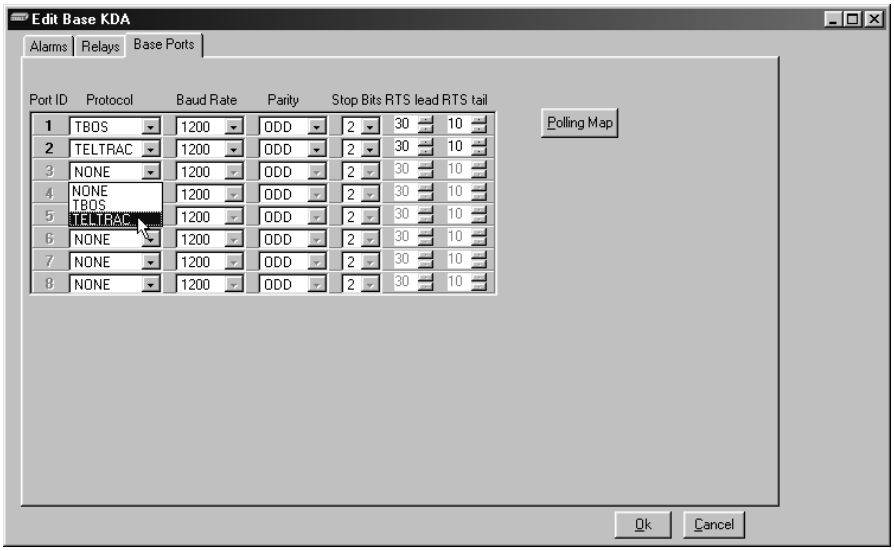


Screens will vary depending on hardware setup.

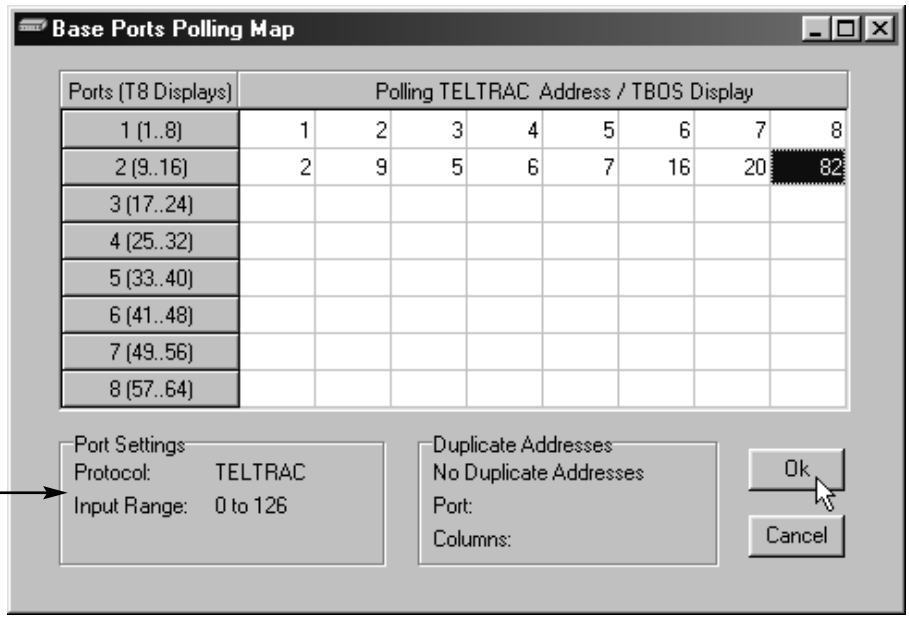
- Enter relays and specifications (screens will vary depending on hardware setup).
- Click **Ok**.



- Select the **Base Ports** tab for KDA832-T8 firmware types.
- For each physical port ID, select the Protocol of the communicating device connected to that port.
- Enter the other appropriate port communication parameters



- Click the **Polling Map** button to assign the TBOS displays and TELTRAC addresses to the KDA-T8 Ports.
- Enter TBOS displays 1-8 for TBOS ports, displays may be omitted if desired.
- Enter up to eight TELTRAC addresses in the desired T8 port.



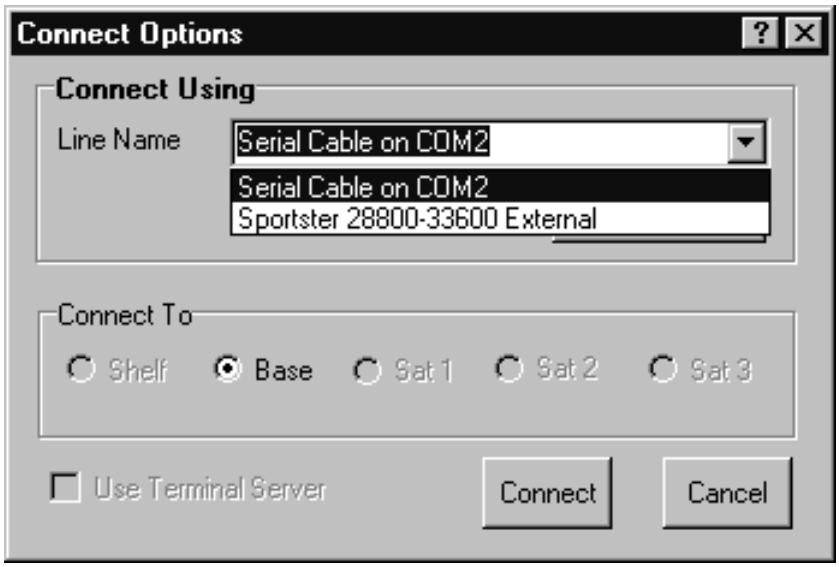
Protocol settings and input ranges for the selected port are specified in this portion of the window.

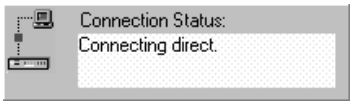
Save Settings

- On the **File** menu, select **Save Device** or **Save Device As**.
- Choose location and click **Ok**.

Connect Options

- To establish a connection with the KDA, select **Connect** from the menu bar.
- Available communications channels, either direct serial ports or modems, are automatically detected and may be selected from the **line name** drop down list. All KDA devices support direct connect via the craft port on the front of the unit. Modem connection is available if a dialup modem is installed on the KDA secondary port.





See pages 2.17-2.18 for more information on connecting to the KDA.

How to Modify an Existing KDA

Editing a device

- Pull down the **File** menu, select the **Open Device** submenu.
- Select the KDA and click **Ok**.
- Edit the file as needed.
- Save your changes by selecting **Save Device** or **Save Device As** under the **File** menu.

How to Import a KDA Configuration Created with a DOS T/config Program

- Pull down the **Tools** menu, select the **Import Device** submenu.
- Select Standard or Timestamp KDA, choose an import file and click **Ok**.
- Edit the file as needed.
- Save your changes by selecting **Save Device** or **Save Device As** under the **File** menu.

See pages 2.6-2.13 for more information on importing a configuration.

Software Details

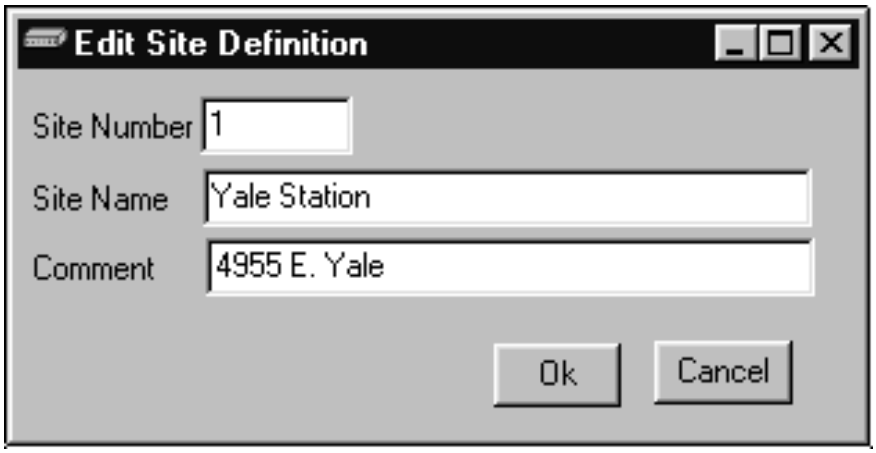
SOFTWARE DETAILS

Edit Site Definition

Site Number
Arbitrary number 1-9999999 used for reporting alarms to T/Mon masters.

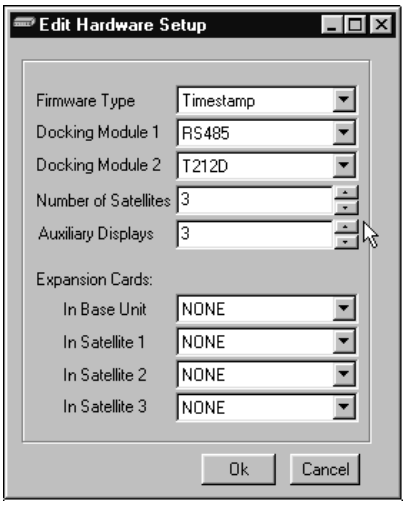
Site Name
Up to 24 characters. Descriptive only, does not affect system operation in any way.

Comment
Up to 30 characters. Descriptive only, does not affect system operation in any way.



Hardware Setup

This screen describes the physical configuration of a KDA shelf assembly, which is made up of interconnected boards and modules and is usually established when the unit is purchased. Entries on this page inform T/KdaW of this hardware configuration, and affect how it communicates with all elements of the system. It also determines what will be displayed on other T/KdaW screens, so it is essential to fill this page out accurately before proceeding to the **Docking Ports**, **Base** and **Satellite** editing screens, or connecting with a KDA device.



Firmware Type

T/KdaW supports the following firmware type and versions:

- Standard versions 2.1G and later
- Timestamp version 1.4B and later
- KDA-E2A version 1.0B and later
- KDA832-T8 version 2.0 and later

Certain features may not be available in all versions; any version limitations will be noted. T/KdaW detects the firmware type and version of a particular KDA device when it connects to it, and will notify the user of any incompatibilities.

The program installed on the base KDA processor chip may be identified through the KDA part number or the version number inscribed on the chip:

Standard

- Part Number KDA-864-01, 05 or 11
- Chip Version 2.1x. or 2.2x

TimeStamp

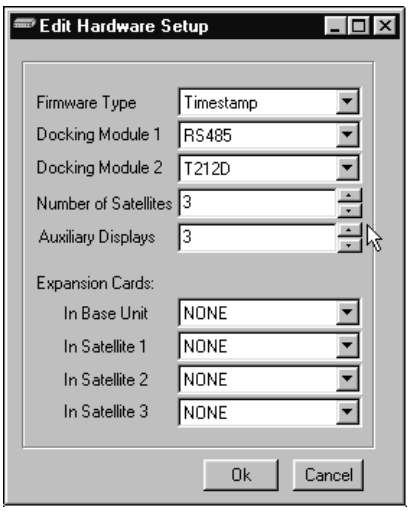
- Part Number KDA-864-03, 08 or 09

KDA-E2A

- Part Number KDA-864-E2-01

Docking Modules

***Note:** The NIA may be used only with Standard firmware versions 2.1i and later, or Timestamp version 1.4m and later.*



Docking Module 1

Piggyback board plugged into the left rear corner of the base KDA, usually used for communicating with an alarm monitoring device such as T/Mon via a dedicated line. May be identified through the part number inscribed on the assembly:

- RS-232: Part Number D-PC-635-10A-00
- T202: Part Number D-PC-635-10A-00
- RS422/RS 485: Part Number D-PC-655-10A-00
- RS-232 to NIA: uses fixed connection from RS-232 docking module to a DPS Network Interface Adapter (NIA): Part Number D-PC-770-10A-0V.
- For Dual RS422 and 212 pad, select RS422 for Docking Module 1 and T212 for Docking Module 2.

Docking Module 2

Piggyback board plugged into the left rear corner of the base KDA, usually used for communicating via a dialup phone line with T/Mon or T/KdaW. May be identified through the part number inscribed on the assembly:

T212: Part Number
D-PC-640-10A-00

Modem Types:

- T212: dialup modem
- T212D: dialup modem and DTMF decoder
- T212X: external modem

Number of Satellites

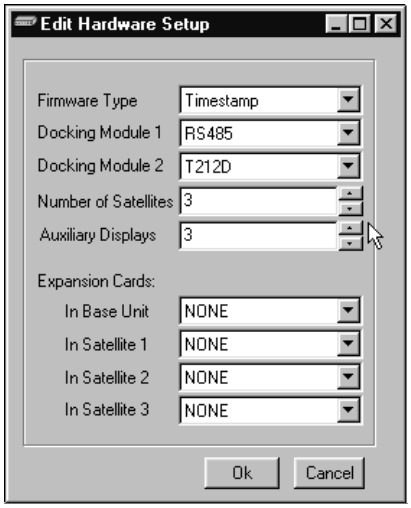
Number of satellite KDAs installed.

Auxiliary Displays

Number of General LCD Display (GLD) units and LED Bars installed.

Expansion Cards

- **In Base Unit**
  Type of expansion card installed in base, if any.
- **In Satellites**
  Type of expansion card installed in satellites, if any. Only the relay cards LR24 and SR24 are supported in satellites.

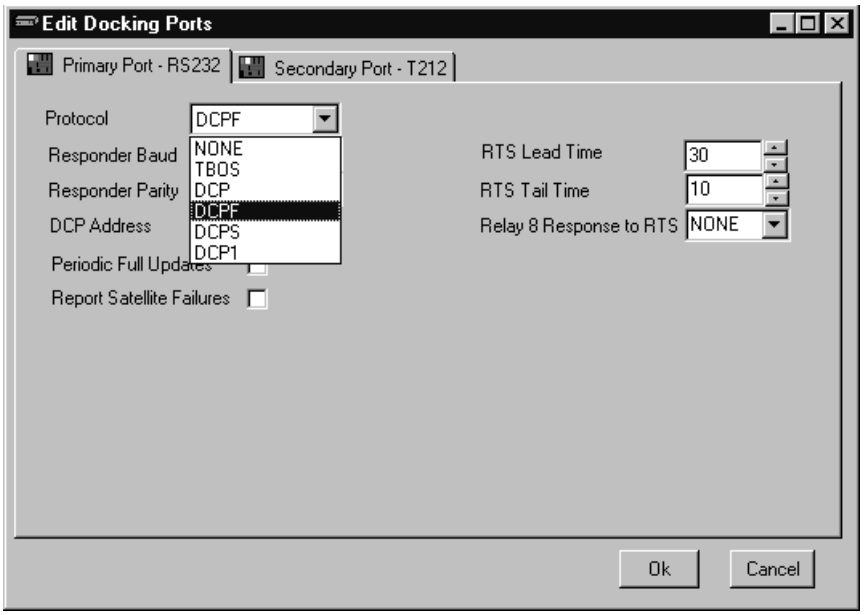


***Note:** a Network Interface Adapter (NIA) is not considered an expansion card, but is a communications device set up under Docking Module.*

Edit Docking Ports

Primary Docking Port

This screen defines detailed parameters for docking modules specified on the **Hardware Setup** screen. Available fields depend upon the module type installed. Available protocols depend upon firmware type.



Docking Modules

RS-232, RS-422, RS-485, T202 or T202F

Protocol Options:

- **DCPF** is normally used when reporting to a T/Mon master. Other DCP-type protocols would only be used in special application.
- **TBOS** may be used when reporting to third-party TBOS masters.
- **E2A** is used only when reporting to E2A masters.
- **ClrChan** is used only when the KDA is being used as a communications link into an external serial device. The external device is plugged into the primary port. All alarm reporting is through the secondary port. The Clear Channel is established by calling into the secondary port, which establishes a pass-through connection to the primary port.

DCP-Type Protocol Settings

Responder Baud	Must match interrogator port setting, normally 9600.
Responder Parity	Must match interrogator port setting, normally NONE.
DCP Address	Must match the base address being polled by the master.
Periodic Full Updates	When checked, the KDA will generate a full alarm status report every 250 polls, as opposed to the normal report that only gives changes. The polling master may also request full status reports. Recommend leaving this unchecked, let the master take care of it.
Report Satellite Failures	When the KDA is monitored by a T/Mon Workstation, the T/Mon will monitor the status of KDA and its alarms. When and if a unit fails, the Report Satellite Failure option will report which unit has the failure. Satellite failures are reported on display 33. Satellite 1 is reported on point 25, satellite 2 on point 26, and satellite 3 on point 27.
RTS Lead Time	Time, in milliseconds, after serial port RTS handshaking is asserted that data bits start to be transmitted. Ordinarily does not have to be changed, but may be adjusted if communications timing problems are encountered or delay is needed for relay keying.
RTS Tail Time	Time, in milliseconds, after serial port data transmission stops that RTS handshaking is cleared. Ordinarily does not have to be changed, but may be adjusted if communications timing problems are encountered or delay is needed for relay keying.
Relay 8 Response to RTS	When checked, on-board relay 8 closes when RTS is asserted. This may be used to key an external radio transmitter, etc.

TBOS Protocol Settings

Responder Baud	Must match interrogator port setting, normally 2400.
Responder Parity	Must match interrogator port setting, normally ODD.
Report Satellite Failures	When checked, reports satellite failures in bit 65.
RTS Lead Time	Time, in milliseconds, after serial port RTS handshaking is asserted that data bits start to be transmitted. Ordinarily does not have to be changed, but may be adjusted if communications timing problems are encountered or delay is needed for relay keying.
RTS Tail Time	Time, in milliseconds, after serial port data transmission stops that RTS handshaking is cleared. Ordinarily does not have to be changed, but may be adjusted if communications timing problems are encountered or delay is needed for relay keying (see below).
Relay 8 Response to RTS	When checked, on-board relay 8 closes when RTS is asserted. This may be used to key an external radio transmitter, etc.

E2A Protocol Settings

E2A Address	The address entered here is effective only if **DIP** switches on the KDA board are all set **OFF**. Address must match the base address being polled by the master. (Satellite E2A addresses are set up automatically.)
Respond with relay status	Check for yes, leave unchecked for no. Display number is 5 when **Respond with relay status** box is no.
Generate COS on Clear	Yes indicates the KDA will issue a Change of State report when an alarm clears. No will not issue a report when an alarm clears.

ClrChan Protocol Settings

Baud	Data rate to use with the craft port interface, normally 1200.
Parity	Use with the craft port interface on the primary docking pad, normally **NONE**.
Word Length	Use with the craft port interface on the primary docking pad, normally 8.
Password	Up to 15 characters.

Docking Module

RS-232 to NIA

SNMP Protocol Settings

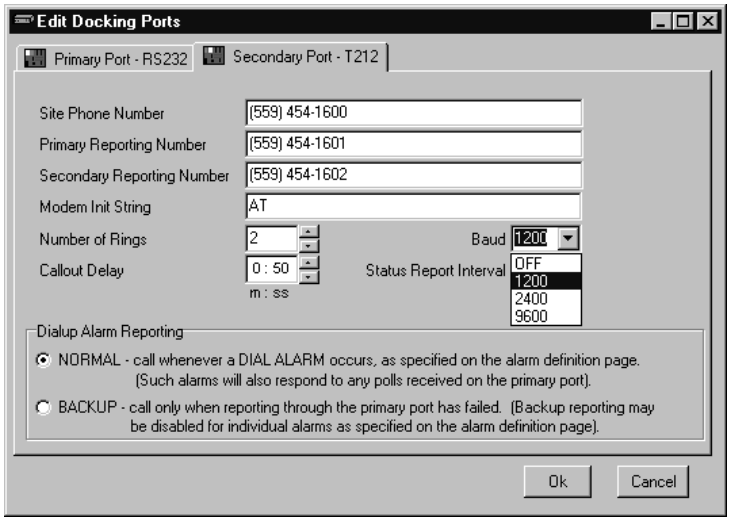
Unit IP Address	Enter the IP address of the KDA, ranging from 000.000.000.000 to 255.255.255.255.
Subnet IP Mask	Enter the Subnet IP Mask of the KDA, ranging from 000.000.000.000 to 255.255.255.255.
Gateway IP Address	Enter the Gateway IP Address of the KDA, ranging from 000.000.000.000 to 255.255.255.255.
Trap Manager IP Address	Enter the IP address for TRAP reporting, ranging from 000.000.000.000 to 255.255.255.255.
Unit ID	Assign an ID number from 1 to 255 if there are other units on the net.
Community Names	• **Get** Enter the numbers or letters as assigned by the network administrator.
	• **Set** Enter the numbers or letters as assigned by the network administrator.
	• **Trap** Enter the numbers or letters as assigned by the network administrator.
Granular Trapping	When checked, reports system status using unique identification for each alarm or relay.
Pass-Through Baud Rate	Enter the pass-through baud rate, default is **OFF**. Use when connecting to an external device through the pass-through port.

UDP Protocol Settings

Unit IP Address	Enter the IP address of the KDA, ranging from 000.000.000.000 to 255.255.255.255.
Subnet IP Mask	Enter the Subnet IP Mask of the KDA, ranging from 000.000.000.000 to 255.255.255.255.
Gateway IP Address	Enter the Gateway IP Address of the KDA, ranging from 000.000.000.000 to 255.255.255.255.
Unit ID	Assign an ID number from 1 to 255 if there are other units on the net.
Pass-Through Baud Rate	Enter the pass-through baud rate, default is **OFF**. Use when connecting to an external device through the pass-through port.

Secondary Docking Port

This screen defines detailed parameters of the docking module 2 specified on the **Hardware Setup** screen. Defaults vary depending upon the modem type installed.



Secondary Port Configuration

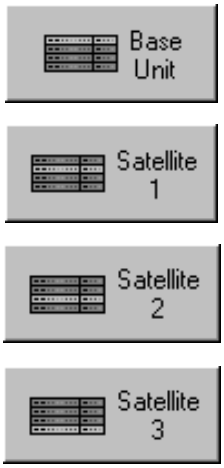
Site Phone Number — Enter the phone number to dial to call into the KDA.

Primary Reporting Number — Enter the primary phone number the KDA should call to report alarms.

Secondary Reporting Number — Enter the secondary phone number the KDA should call to report alarms.

Modem Unit String	Number of Rings enter the number of rings that the KDA should wait before answering an incoming call.
Callout Delay	Sets the minimum time that the KDA will wait after a previous dialout attempt to either call in a new alarm or call an alternate number if a previous alarm was not acknowledged.
Baud	Select from **OFF**, **1200**, **2400** or **9600**, normally 1200.
Status Report Interval	The time period between periodic alarm status reports dialed from the KDA to T/Mon. A value of 0 for both hours and minutes disables periodic status reporting.
Dialout Alarm Reporting	Determines when the KDA will use the dialup link to report alarms (as opposed to normal reporting via fixed connection on the primary port). This entry works in conjunction with an entry on the Alarms definition page for each individual alarm: • When **NORMAL**, calls whenever a **DIAL ALARM** occurs, as specified on the Alarms page. • When **BACKUP**, calls only when the primary port has failed, may be enabled-or disabled for individual alarms on the **Alarms** page.

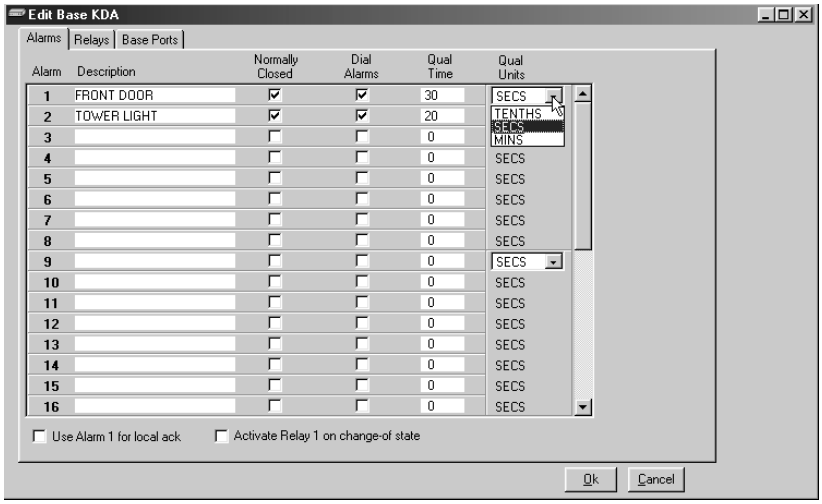
Base and Satellite Units



Alarms, Relays and Expansion Cards

This page defines the alarms, relays and expansion cards on a base or satellite board that will be monitored and reported by the KDA. Screens will vary depending upon hardware setup.

See section 4 for expansion cards.



Alarms

Description

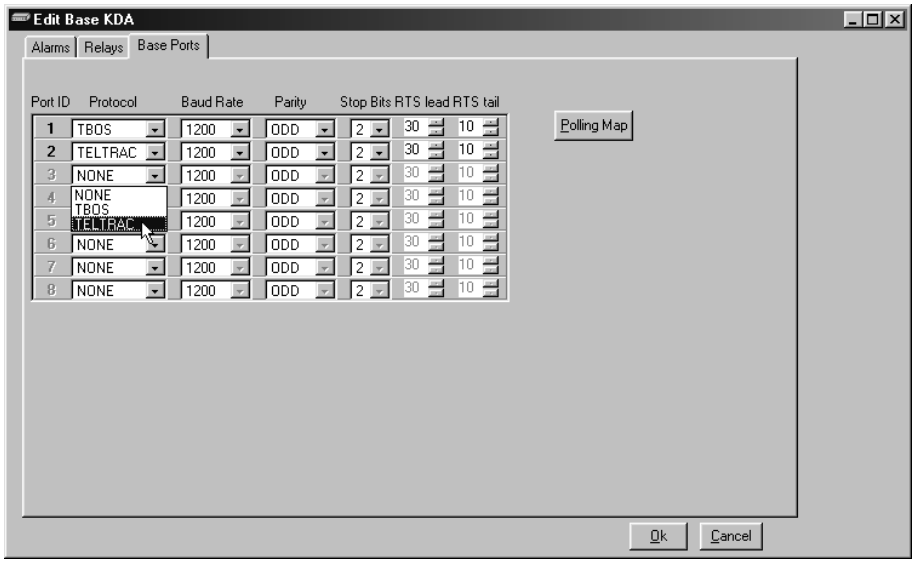
Any useful name that may be attached to the alarm, up to 21 characters. This name is copied to KDA internal memory when connected to standard firmware versions and later, or Timestamp firmware version. It is used only in the T/KdaW program itself. If alarms are being reported via SNMP, alarm descriptions are obtained from this entry. It otherwise has no effect on system operation.

Normally Closed	Alarms are essentially detected as changes in the position of a switch. The KDA assumes that conditions are normal when a switch is open and triggers an alarm when it closes. In some applications this is reversed and the alarm occurs when the switch opens. Check Normally Closed if you have any alarms that are wired up this way.
Normal Dialout	Dial Alarms if NORMAL dialup alarm reporting has been selected under Edit Docking Ports - Secondary Port, alarms checked here will be dialed when they occur (they will also respond to any polls received on the primary port).
Backup Dialout	Enable Dial Backup if BACKUP dialup alarm reporting has been selected under Edit Docking Ports - Secondary Ports, alarms checked here will be dialed when they occur if communication fails on the primary port.
When Firmware Type is Timestamp or E2A	**Qual Time** is the time period that an alarm must be active before the KDA will consider it to be valid and start to report it. Range and resolution depends upon Qualification Units. **Qual Units** time units — tenths of seconds, seconds or minutes — referred to by the Qualification Time entry. Units apply to groups of eight consecutive alarms.
Use Alarm 1 for local ack	If you are physically located near a KDA, you can acknowledge alarms directly to the device. Wire up a switch(usually a push button) as Alarm 1, and check this entry to tell the KDA to treat it as an ack.
Activate Relay 1	When checked, closes Relay 1 whenever an alarm on COS occurs and keeps it closed until it is ack'ed. This is often used to sound a buzzer, etc.

Relays

Description — Optional identifying information, shows on monitor display.

Momentary Period — Time (0.1 seconds to 25.5 seconds) that a relay **Activation** stays closed when issued a Momentary command.



Base Ports

Port ID — Physical port located on the KDA

Protocol — Select the Protocol to be used (TBOS or TELTRAC)for communicating with devices connected to that port. Select **None** if the port is not used.

Baud Rate — Select the baud rate of the port here. Select from 1200 or 2400 for TBOS. TELTRAC ports must be 1200 baud and have no selectable options for baud rate.

Parity — Select the parity setting from **None**, **Odd** or **Even.** Odd is the default selection.

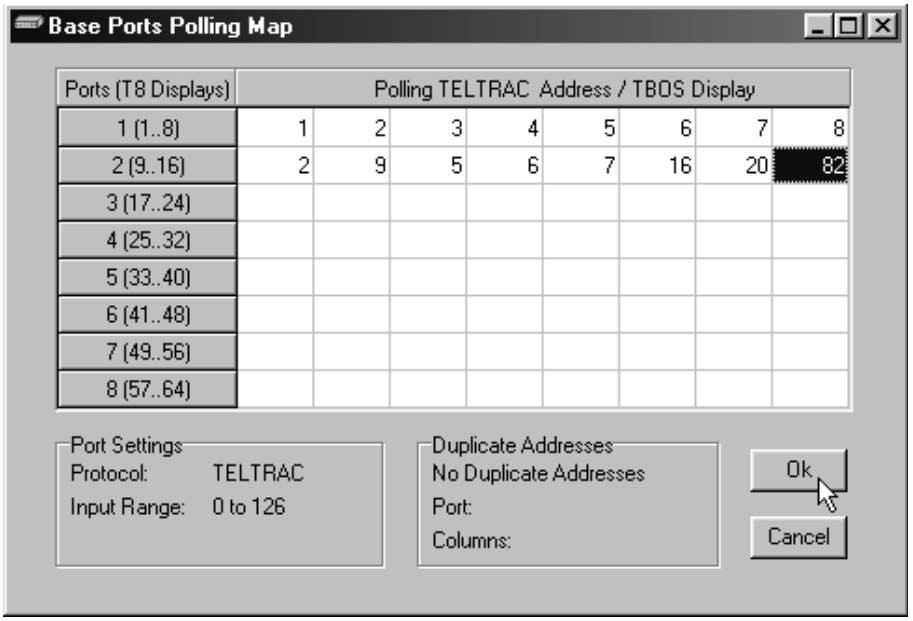
Stop Bits — Select 1 or 2 Stop Bits.

RTS lead — Time, in milliseconds, after serial port RTS handshaking is asserted that data bits start to be transmitted. Ordinarily does not have to be changed, but may be adjusted if communications timing problems are encountered or delay is needed for relay keying.

RTS tail

Time, in milliseconds, after serial port data transmission stops that RTS handshaking is cleared. Ordinarily does not have to be changed, but may be adjusted if communications timing problems are encountered or delay is needed for relay keying (see below).

There are eight TELTRAC addresses per port with one display per address (Points 1-63). Device failures appear on point 64, 65, and 66 of each display.



Polling Map

Note:
To preserve TELTRAC mapping on DPS masters, always append new TELTRAC addresses to the first available address slot on the port.

Ports (T8 Displays)

This column defines the physical KDA ports. Their DCPF output display mapping is shown in parenthesis.

Polling TELTRAC Address/TBOS Display

Enter the TELTRAC addresses and TBOS displays to be shown on the KDA Ports. TBOS displays are selected from the range of 1-8 and must be sequential. (T/kdaW will automatically adjust if TBOS displays are entered into an incorrect field.) TELTRAC addresses are selected from the range of 0-126. Any eight may be selected and entered in any order. Duplicate addresses are not allowed.

TELTRAC mapping example:

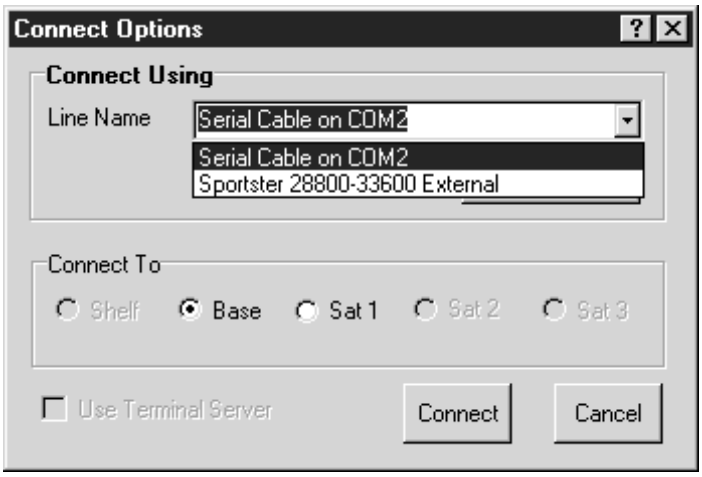
Port 2, TELTRAC Addresses: 2 9 5 6 7

Map to displays: 9 10 11 12 13

CONNECTING TO THE KDA

Connect Direct

Note: Only com ports that are installed and available will appear on your KDA software screen.



Note:
Each satellite must be initially downloaded individually from its own craft port. (See the First Time Satellite Configuration section on the following page.)

After setting your KDA and expansion card configurations, go to the **Connect** menu and set up this screen.

Line Name — Select the serial port that will be used to connect to the KDA.

Line Properties — Select to edit the baud rate, data bits, parity and stop bits of the connection device.

Connect To

Shelf — You may select the **Shelf** option once the base and satellite units have been initially configured. Then, plug into the base KDA. Both the base and all satellites are accessible through this connection.

Base — Select the **Base** option to connect to just the base unit. Then, plug into the base KDA.

Sat 1-2-3	Select the appropriate satellite that corresponds to the serial cable connection. Only that satellite and any expansion card installed in it may be accessed through this connection. Then, plug into that satellite. This option is used for the initial download of each satellite in order to tell the KDA that it is a Satellite KDA and not a Base and also which Satellite address it is to use. This is accomplished after connecting to the appropriate KDA and then writing the configuration to it by selecting the "Write To KDA button (See Writing and Reading section).
Use Terminal Server	N/A

First Time Satellite Configuration

To configure satellites for the first time, go through the hardware setup screens as described earlier in the manual. A satellite KDA needs to be told that it is a satellite and not a base unit. This is done by connecting to each Satellite KDA individually at its own front panel craft port.

1.	Create a database specifying the satellite count. See Hardware Setup menu.
2.	Connect your computer to the craft port of the satellite
3.	Click the **Connect** menu at the top of the screen to access the Connect options window.
4.	In the **Connect To** portion of the window, select the radio but ton of the satellite number that you are connecting to.
5.	Click the **Connect** button to connect to the KDA.
6.	Write the information to the KDA by clicking the **Write to KDA** button (See the Writing and Reading section page 2.25)

Repeat these steps for each satellite KDA until they all have been provisioned as satellites. Once this has been done, further changes cal all be done from the base KDA's craft port with the Connect To radio button set to **Shelf.**

Monitoring the KDA

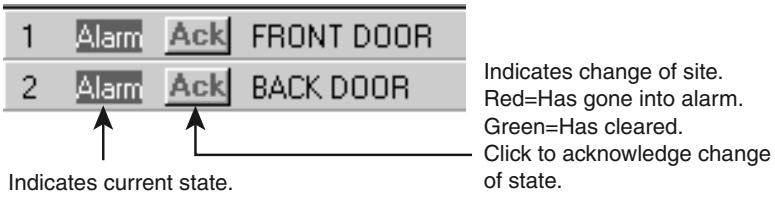
After connecting to a base unit or satellite, click on the monitor button from the Connect to KDA tool bar.

Alarms

Alarm Acknowledgement

Use this screen to acknowledge alarms. When an alarm is in a change of state (COS) mode, a red alarm button will be displayed on the Monitor KDA Alarms screen. First, click on the red **Ack** button to acknowledge the alarm. Then, the red Ack will turn green and the KDA will activate a relay.

Warning: *Monitoring KDA alarm points through T/KdaW prevents normal alarm reporting. This should only be used as a turn-up diagnostic.*


1 Alarm Ack FRONT DOOR
2 Alarm Ack BACK DOOR
Indicates change of site.
Red=Has gone into alarm.
Green=Has cleared.
Click to acknowledge change of state.
Indicates current state.

Relays

Released	Relay open
Latch	Relay closed
Mom	(Momentary) Close the relay for a pre-determined time

Note to NIA Card and SNMP users: ***Alarm descriptions are used by your SNMP manager, otherwise the alarm descriptions are ignored by the KDA.***

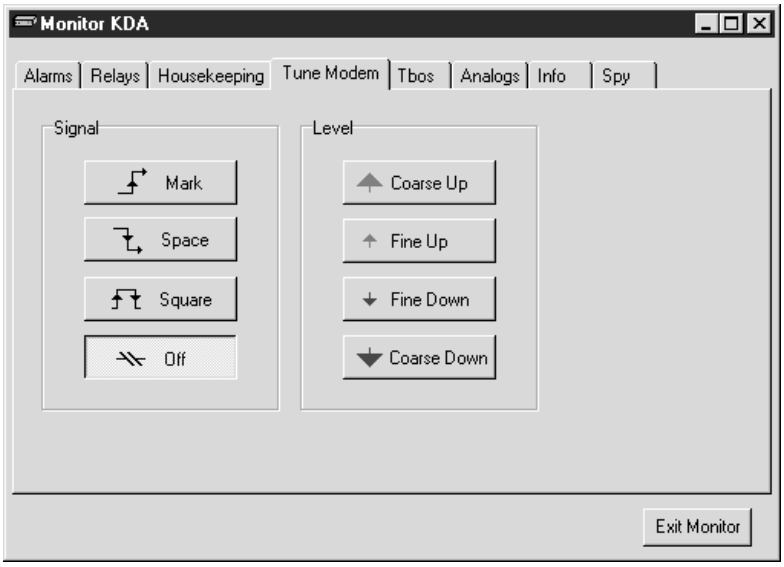
Housekeeping

Applicable to Timestamp version firmware only

Power Up	System has been re-powered
Watchdog Reset	Watch dog reset has occurred
Points Locked	One or more points locked
Lost Provisioning	Download configuration lost
Memory Diag Fail	There has been a CPU failure
Exp Card Error	There has been an expansion card error
Reserved	
Modem Response	Modem not getting a response
No Dialtone	Modem not getting a dialtone
Time Stamp Over Flow	Time stamp buffer memory has filled and "wrapped around" deleting some records.

Tune Modem

This feature is only available when a 202 modem is installed on the primary docking port. To access this screen, click on the Monitor button and select the **Tune Modem** tab.



Signal

Mark	Transmit high tone
Space	Transmit low tone
Square	Transmit high/low square wave
Off	Transmitter off

Level

Coarse Up	Level up 10 steps
Fine Up	Level up 1 step
Fine Down	Level down 1 step
Coarse Down	Level down 10 steps

Warning: ***Tuning a modem above -2 Dbm will cause wave form distortion.***

Tuning optimizes the signal quality of the 202 tone modem interface. The receive level is automatically adjusted over a 20 dB range. A "pad" on the input can be set for an input range of -43 to -23 dB or for a range of -23 -3 dB. The modem transmit level is software adjustable and, therefore, does not require the unit to be opened. The modems are shipped from the factory with the transmit level set a t approximately -13dBm. The transmit level is stored in NV RAM, making it unaffected by power removal.

Tuning Procedures

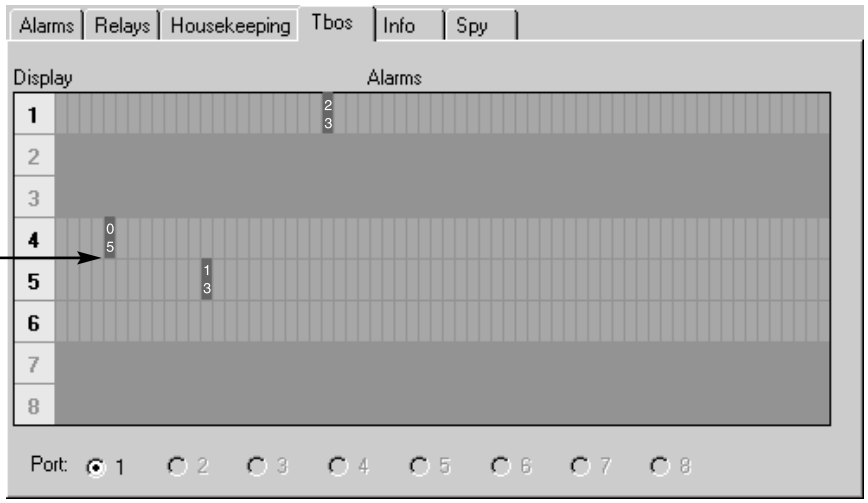
1) Connect a Level Meter across the modem transmit leads. If the modem is not connected to any terminating equipment, place a 620 ohm resistor across the leads. (A resistor is not necessary if the modem is connected to a VF line or other terminating device.)
2) Place transmitter on **Mark** (High Tone).
3) Click the appropriate signal keys to achieve a desirable transmit level range.
4) When the level is correct, return to the monitor screen by selecting another tab from the Monitor KDA toolbar, or select **Exit Monitor** to return to the Connect to KDA screen.

Tbos

This screen shows the state of all 64 Tbos alarm points.

Any active alarms are shown in red with an alarm number displayed vertically.

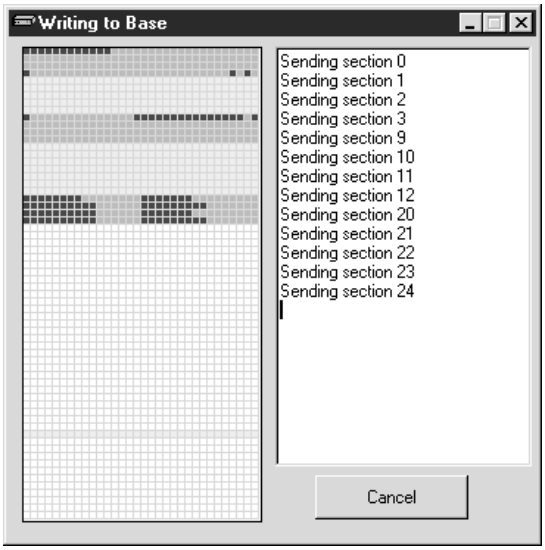
The channel number is shown in yellow if invalid information is being received.



Writing and Reading

Write to KDA

This feature transmits device properties in the current system record to the KDA. If a connection has been made to the KDA Shelf and satellites have been installed and initialized, configuration data will also be written to the satellites.



***Note:** The Write to KDA/Read From KDA progress window depicts the internal memory of the KDA.*
Green = Unchanged
Blue = Changed
Yellow = Unused

Read from KDA

This feature replaces the current system record with device properties retrieved from the KDA. A message window also appears, showing progress and any exceptional conditions that may arise. If a connection has been made to the KDA Shelf, and satellites have been installed and initialized, configuration data will also be retrieved from the satellites.

***Note:** New information written to the KDA does not take effect until you have disconnected, which causes the KDA to reboot.*

How to Terminate Writing or Reading

A write- or read-in-progress may be terminated by clicking **Cancel**. However, it is not recommended since it leaves the KDA with a mixture of two configuration records. Clicking **Done** after the write is complete closes the **Write** window and the system remains connected.

Troubleshooting

TROUBLESHOOTING

Spy Mode

Primary, Satellite, LAN Traffic and LAN Commands

Notes: Spy modes work only in direct mode, requiring the computer to be connected directly to the craft port.

'LAN' here refers to communications between a host and satellite card.

LAN protocol is DCPF. Please refer to your KDA user manual for information on DCPF protocol.

Spy mode will allow examination of the protocol between a host KDA and its associated expansion card when being polled from the T/MonXM master. By plugging in a lap top or other DOS computer at the craft port you can view the protocol in either ASCII or Hexadecimal. This allows on-the-spot analysis of the communications between the KDA and the polling master to quickly isolate communication problems.

The query and response is indicated by the color of the data bytes: the host data in green and the expansion card response in red.

Spy **LAN Traffic** and **LAN Commands** applies to expansion card. **Spy Primary** applies to **primary docking pad**. Spy Satellite to base satellite communications.

Alarms
Relays
Housekeeping
Tbos
Info
Spy
00 FF A9 80 00 FF A9 FF 00 FF A9 00 00 FF A9 00 00 FF A9 FF 00 FF A9 00 FF A9 C0 00 FF A9 FF 00 FF A9 00 FF A9 C0 00 FF A9 80 00 FF A9 FF 00 FF A9 80 00 FF A9 FF 00 FF A9 80 00 FF A9 C0 00 FF A9 80 00 FF A9 FF 00 FF A9 C0 00 FF A9 FF 00 FF A9 00 FF A9 C0 00 FF A9 FF 00 FF A9 00 FF A9 00 00 FF A9 00 FF A9 00 00 FF A9 FF 00 FF A9 00 00 FF A9 80 00 FF A9 FE 00 FF A9 00 FF A9 00 00 FF A9 00 FF A9 C0 00 FF A9 80 00 FF A9 FC 00 FF A9 00 FF A9 80 00 FF A9 80 00 FF A9 FF 00 FF A9 C0 00 FF A9 00 FF A9 FF 00 FF A9 80 00 FF A9 80 00 FF A9 FF 00 FF A9 00 00 FF A9 FF 00 FF A9 FE 00 FF A9 F0 00 FF A9 00 FF A9 FE 00 FF A9 E0 00 FF A9 FF 00 FF A9 FF 00 FF A9 80 00 FF A9 00 00 FF A9 00 FF A9 C0 00 FF A9 00 00 FF A9 FC 00 FF A9 00 00 FF A9 00 FF A9 FC 00 FF A9 C0 00 FF A9 80 00 FF A9 FF 00 FF A9 80 00 FF A9 80 00 FF A9 FF 00 FF A9 80 00 FF A9 C0 00 FF A9 00 FF A9 C0 00 FF A9 00 00 FF A9 FC 00 FF A9 E0 00 FF A9 80 00 FF A9 FC 00 FF A9 E0 00 FF A9 00 00 FF A9 FF 00 FF A9 C0 00 FF A9 00 FF A9 FF 00 FF A9 FE 00 FF A9 00 00 FF A9 FE 00 FF A9 C0 00 FF A9 80 00 FF A9 FF
Pause
Clear
Capture
Hex
Ascii
Dec
Scroll
Green=Send
Red = Recv
Primary
Satellite
Lan Traffic
Lan Commands

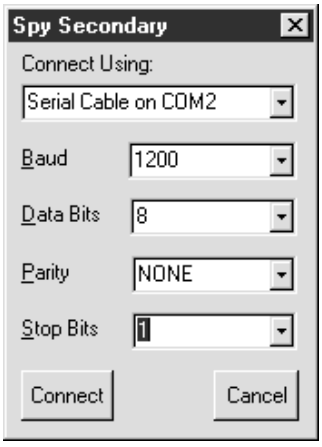
See page 3.3 for screen definitions.

Spy Options

Pause	Causes display to temporarily stop. (Button will toggle to **Resume** once selected.)
Clear	Refreshes screen by erasing all data bytes and starting with clean window.
Capture	Captures protocol analyzer display to a file in the TCONFIG directory. File name appears at lower right corner of analyzer window. In File name includes a sequence number. The 000 increments 001, 002, etc. each time a capture is executed. Deleting the files from the directory will return the counter to 000.
Hex, Ascii, Dec	View data bytes in any one of three forms.
Scroll	Check this box to use automatic scrolling.
Primary, Satellite, Lan Traffic or LanCommands	Select desired unit or items to view.

Spy Secondary

Access the Spy Secondary screen under the Tools item under the main T/KdaW menu. This screen will allow the user to view and capture the activity on the docking module installed in the KDA secondary docking pad, usually a modem.



Display Protocol

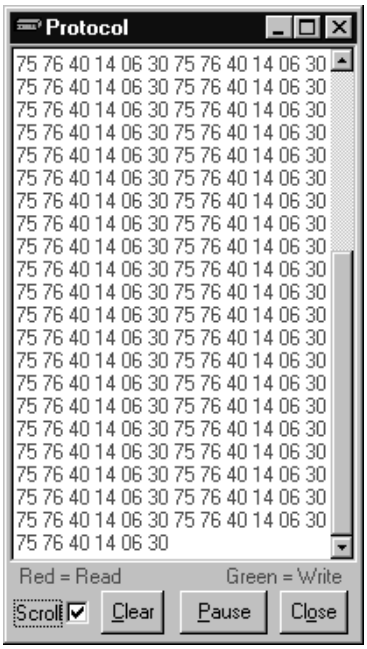
This screen reveals the data bytes communicated between the KDA software and hardware. It shows communications between the TKdaW program and the KDA itself. Red is read (received) from KDA, Green is written (transmitted) to KDA.

Scroll
Check this box for data to automatically scroll. Allows you to view the most current code without manually using the scroll bar.

Clear
Click this button to erase information from the Protocol screen.

Pause
Click to pause the protocol viewing. Re-click to resume.

Close
Click close to return to the main connect window.



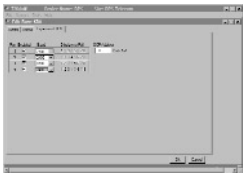
Help and Technical Support

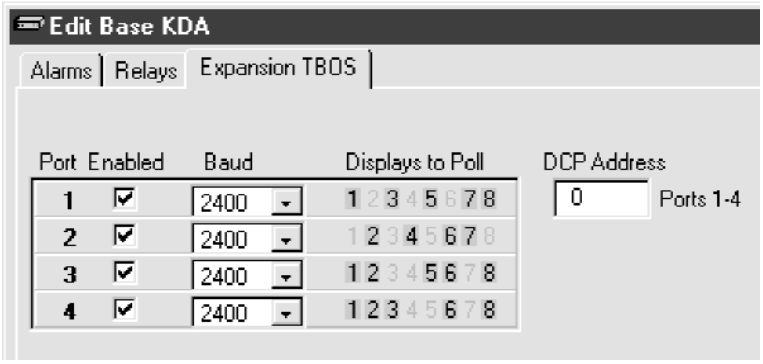
The Help screen may be accessed by clicking the Help button or F1 at any time. If you need further assistance, contact our technical support staff at (800) 622-3314, or check our web site Tech Support FAQ at www.dpstele.com.

Expansion Cards

EXPANSION CARDS

4- and 8-Channel TBOS




Edit Base KDA
Alarms
Relays
Expansion TBOS
Port Enabled Baud Displays to Poll DCP Address
1 2400 1 2 3 4 5 6 7 8
2 2400 1 2 3 4 5 6 7 8
3 2400 1 2 3 4 5 6 7 8
4 2400 1 2 3 4 5 6 7 8
0
Ports 1-4

Provides 4 or 8 TBOS polling ports. Each port may poll up to 8 displays (512 alarm points).

Edit Expansion Ports Screen for the 4- and 8-Port Scanner

Note: The TBOS portion of the 8-analog 6-TBOS card uses the same screen.

Enabled — Only the ports that are currently connected to active TBOS sources should be enabled. Check to enable, leave blank to disable.

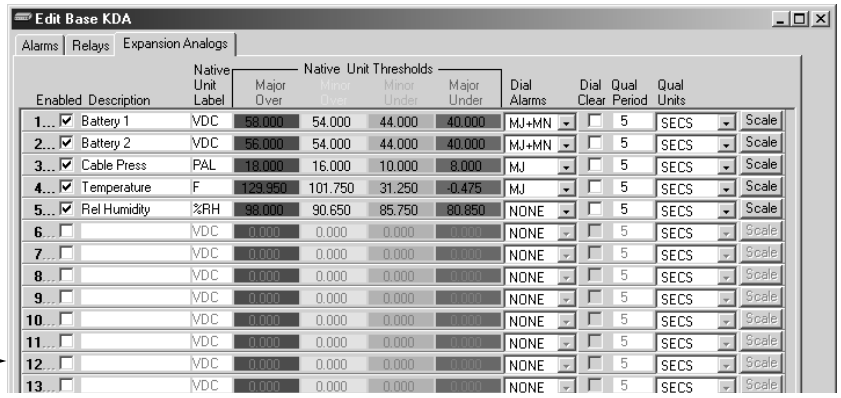
Baud — Select 1200 or 2400, normally 2400.

Displays to Poll — Click on the number to enable. Select only displays available in the interrogated TBOS device. Leave out unavailable displays to save polling time and to prevent unnecessary failed display alarms.

DCP Address

[When using a DCP-type protocol] — Must match the base address being polled by the master. Any range from 1-255 or 0 to disable.

8- and 16-Channel Analog


Edit Base KDA
Alarms
Relays
Expansion Analogs
Native Unit Thresholds
Enabled Description Native Unit Label Major Over Minor Over Minor Under Major Under Dial Alarms Dial Clear Qual Period Qual Units
1... Battery 1 VDC 58.000 54.000 44.000 40.000 MJ+MN 5 SECS Scale
2... Battery 2 VDC 56.000 54.000 44.000 40.000 MJ+MN 5 SECS Scale
3... Cable Press PAL 18.000 16.000 10.000 8.000 MJ 5 SECS Scale
4... Temperature F 129.950 101.750 31.250 -0.475 MJ 5 SECS Scale
5... Rel Humidity %RH 98.000 90.650 85.750 80.850 NONE 5 SECS Scale
6... VDC 0.000 0.000 0.000 0.000 NONE 5 SECS Scale
7... VDC 0.000 0.000 0.000 0.000 NONE 5 SECS Scale
8... VDC 0.000 0.000 0.000 0.000 NONE 5 SECS Scale
9... VDC 0.000 0.000 0.000 0.000 NONE 5 SECS Scale
10... VDC 0.000 0.000 0.000 0.000 NONE 5 SECS Scale
11... VDC 0.000 0.000 0.000 0.000 NONE 5 SECS Scale
12... VDC 0.000 0.000 0.000 0.000 NONE 5 SECS Scale
13... VDC 0.000 0.000 0.000 0.000 NONE 5 SECS Scale

Note: The Analog portion of the 8-analog 4-TBOS card uses this same screen.

Enabled — Check to activate a particular channel. A channel cannot be edited until it is enabled.

. . . — Click ellipses to access the analog scaling worksheet.

Description — Enter the point description, up to 13 characters.

Native Unit Label — Enter a 3-character name or abbreviation for the native units being measured (e.g., F OR C for degrees).

Native Unit Thresholds — Enter the boundaries for threshold alarms. The scaling calculation for any threshold entry may be viewed by right-clicking on the entry.

Dial Alarms — Enter **NONE** for no alarms reported; enter **MJ** for only Major Over or Major Under to be reported; enter **MJ+MN** for all cases reported.

Dial Clear — When checked, a dialed alarm will also be dialed when it clears.

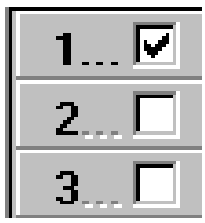
Qual Period and Qual Units — Enter the time period an alarm must be active before the KDA will validate it to be reported.

Scale — Click the "Scale" button to acces the analog scaling worksheet. This enables monitoring in native units, rather than volts or milliamps.

(8- and 16-Channel Analog continued)

[When using a DCP-type protocol]

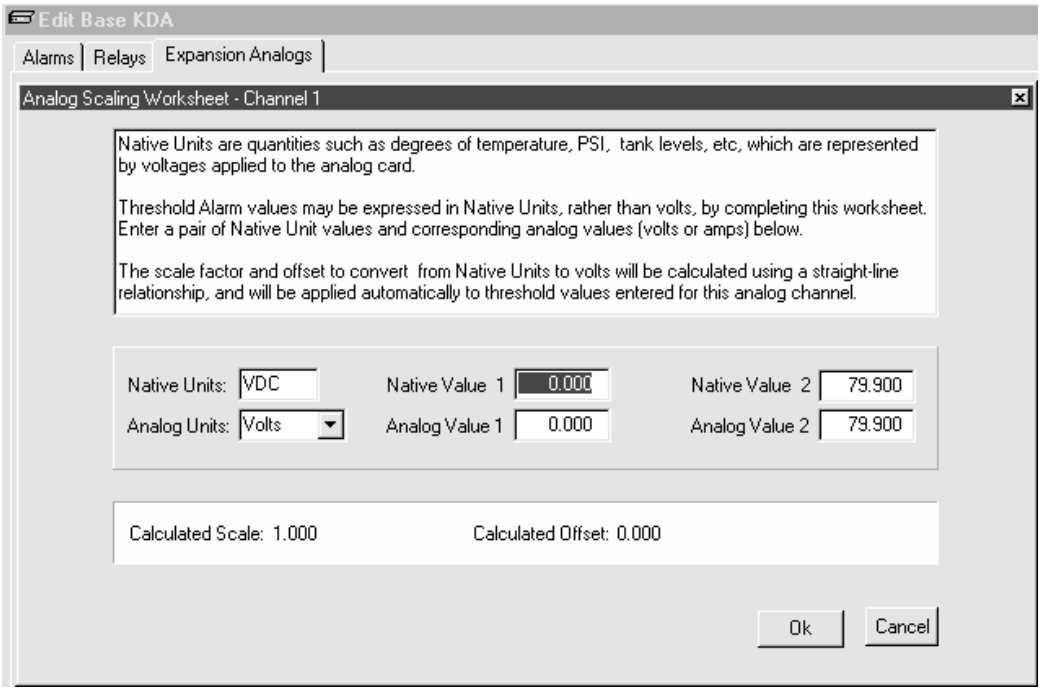
DCP Address	Must match the base address being polled by the master. Any range from 1-255 or 0 to disable.
Report Threshold Only	Check if only threshold alarms are to be reported, not analog values.



Analog Scaling Worksheet

Access the worksheet by clicking on the elipses following the analog channel number on the analog editing page or the "scale" button. Analog scaling assumes that there is a positive straight-line relationship between the native quantity being measured, such as degrees of temperature and the corresponding voltage (or current) that is applied to the analog card.

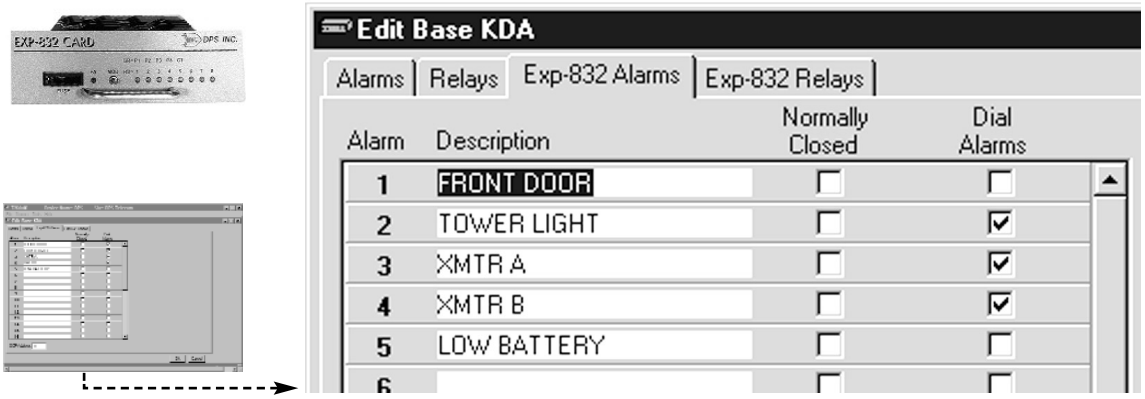
Native Units	Same as Native Unit Label on the main analog page — a 3-character name or abbreviation for the native units being measured (e.g., RH for relative humidity or F for Fahrenheit).
Analog Units	Volts or Current. (Current actually measures the voltage drop across a standard 250-ohm shunt that is inserted by a PC board jumper.)
Native Value 1	A value in native units such as degrees.
Analog Value 1	The voltage (or current) corresponding to Native Value 1.
Native Value 2	A value in native units such as degrees.
Analog Value 2	The voltage (or current) corresponding to Native Value 2.


Edit Base KDA
Alarms
Relays
Expansion Analogs
Analog Scaling Worksheet - Channel 1
Native Units are quantities such as degrees of temperature, PSI, tank levels, etc, which are represented by voltages applied to the analog card.
Threshold Alarm values may be expressed in Native Units, rather than volts, by completing this worksheet. Enter a pair of Native Unit values and corresponding analog values (volts or amps) below.
The scale factor and offset to convert from Native Units to volts will be calculated using a straight-line relationship, and will be applied automatically to threshold values entered for this analog channel.
Native Units: VDC
Native Value 1 0.000
Native Value 2 79.900
Analog Units: Volts
Analog Value 1 0.000
Analog Value 2 79.900
Calculated Scale: 1.000
Calculated Offset: 0.000
Ok
Cancel

Analog Scaling Worksheet

***Note:** Scaling is automatically calculated in*
Volts (or Milli-amps) = Native Units x Scale + Offset

Exp 832 Alarms



Description — Enter the point description, up to 13 characters.

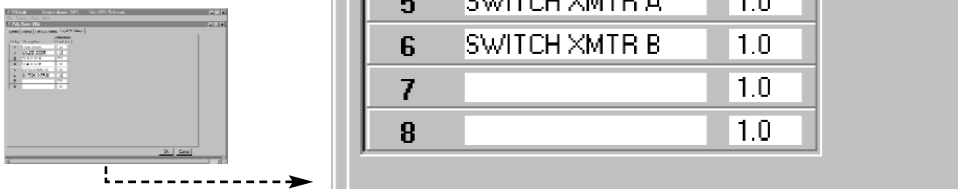
Normally Closed — Alarms are essentially detected as changes in the position of a switch. The KDA assumes that conditions are normal when a switch is open and triggers an alarm when it closes. In some applications this is reversed and the alarm occurs when the switch opens. Check Normally Closed if you have any alarms that are wired up this way.

Dial Alarms — Check to dial upon occurrence of an alarm. If left unchecked, alarm will be held until polled by the master.

DCP Address — Must match the base address being polled by the master. Any range from 1-255 or 0 to disable.

[When using a DCP-type protocol]

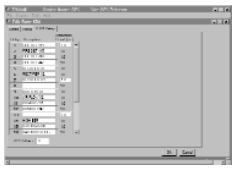
Exp 832 Relays

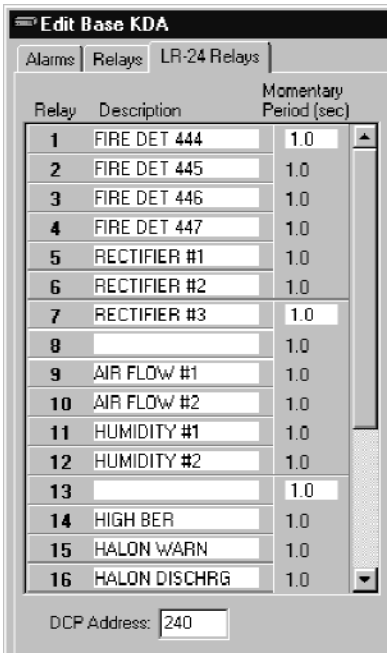


Description — Enter the point description, up to 13 characters.

Momentary Period — Enter the time period in seconds that the control point will remain activated when a momentary operate command is sent.

LR-24 and SR-24 Relays





Description — Any useful name up to 13 characters.

Momentary Period — Enter the time period in seconds that the control point will remain activated when a momentary operate command is sent. Momentary periods apply to groups of 6 relays.

DCP Address — Must match the base address being polled by the master. Any range from 1-255 or 0 to disable.

[When using a DCP-type protocol]

Appendix

Warranty

DPS Telecom warrants, to the original purchaser only, that its products a) substantially conform to DPS' published specifications and b) are substantially free from defects in material and workmanship. This warranty expires two years from the date of product delivery with respect to hardware and ninety days from the date of product delivery with respect to software. If the purchaser discovers within these periods a failure of the product to substantially conform to the specifications or that the product is not substantially free from defects in material and workmanship, the purchaser must promptly notify DPS. Within reasonable time after notification, DPS will endeavor to correct any substantial non-conformance with the specifications or substantial defects in material and workmanship, with new or used replacement parts. All warranty service will be performed at the company's office in Fresno, California at no charge to the purchaser, other than the cost of shipping to and from DPS, which shall be the responsibility of the purchaser. If DPS is unable to repair the product to conform to the warranty, DPS will provide at its option one of the following: a replacement product or a refund of the purchase price for the non-conforming product. These remedies are the purchaser's only remedies for breach of warranty. Prior to initial use the purchaser shall have determined the suitability of the product for its intended use.

DPS does not warrant a) any product, components or parts not manufactured by DPS, b) defects caused by the purchaser's failure to provide a suitable installation environment for the product, c) damage caused by use of the product for purposes other than those for which is was designed, d) damage caused by disasters such as fire, flood, wind or lightening unless and to the extent that the product specification provides for resistance to a defined disaster, e) damage caused by unauthorized attachments or modifications, f) damage during shipment from the purchaser to DPS, or g) any abuse or misuse by the purchaser.

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

In no event will DPS be liable for any special, incidental, or consequential damages based on breach of warranty, breach of contract, negligence, strict tort, or any other legal theory. Damages that DPS will not be responsible for include but are not limited to, loss of profits; loss of savings or revenue; loss of use of the product or any associated equipment; cost of capital; cost of any substitute equipment, facilities or services; downtime; claims of third parties including customers; and injury to property.

The purchaser shall fill out the requested information on the Product Warranty Card and mail the card to DPS. This card provides information that helps DPS make product improvements and develop new products.

For an additional fee DPS may, at its option, make available by written agreement only an extended warranty providing an additional period of time for the applicability of the standard warranty.

Technical Support

If a purchaser believes that a product is not operating in substantial conformance with DPS' published specifications or there appear to be defects in material and workmanship, the purchaser should contact our technical support representatives. If the problem cannot be corrected over the telephone and the product and problem are covered by the warranty, the technical support representative will authorize the return of the product for service and provide shipping information. If the product is out of warranty, repair charges will be quoted. All non-warranty repairs receive a 90-day warranty.

GLOSSARY OF TECHNICAL TERMS

Alarm Levels -

Alarm Levels are indicators that correspond to a specified alarm. Alarm Levels range from A to D, with A as the highest priority, often designated critical.

Alarm Point -

A single discrete alarm input that requires a discrete (usually on-to-off or off-to-on) change in current flow or voltage to indicate a change of alarm condition from normal to alarm state. Assigned to a point number in a display and address. Usually reported to master as a single bit in a data stream.

Alternate Path -

A backup route to the master via dial facility. The alternate path will be selected by the remote unit when communications via the primary path fail.

ASCII -

The abbreviation for American Standard Code for Information Exchange. ASCII is a generic DOS text file. Most word processors can read ASCII text.

Auxiliary Display (GLD) -

A unit providing remote alarm point descriptions. Time Stamp KDA versions 1.7 and above will support up to 3 General LCD Displays (GLDs).

Battery -

Facility DC power. Normally supplied from a battery plant inside the office. Polarity is normally negative (positive ground) in a telecom facility.

Baud -

The data transmission rate that the COM Port uses to talk to the equipment. Common data rates include: 1200, 2400, 4800, 9600, 19200 (19) and 38400 (38).

BIOS -

Basic Input/Output Operating System. This is the network of components that gives a computer the ability to operate with external devices and programs.

Change Of State -

This is the condition of a point when it is in transition from one state to another. Change of State is abbreviated as COS.

Config. Sys File -

The CONFIG.SYS file is an ASCII text file that allows the user to configure certain aspects of the operating system. Aspects that can be configured include: the number of internal disk buffers allocated, the number of files that can be open at one time, the formats for date and time, and the name and location of the executable command processor file.

Connectorized

Unit provides quick-mate type connectors on the rear panel, as opposed to the more permanent wire-wrap connections. Connectorized units can shorten time for installation and replacement.

Control Point -

Relay isolated output that is controlled by command from the master. Normally-open (SPST) dry contacts are commonly used.

Com Port -

Abbreviation for Communication Port.

Communication Port -

Serial interfaces that can be used for additional devices such as modems. Abbreviated as Com Port and normally referred to as COM1 & COM2.

COS -

This is the abbreviation for Change Of State.

Craft Port -

Serial port for connection of a computer or ASCII terminal to test and modify configuration of the remote.

CTS -

This is the abbreviation for Clear To Send.

Database -

A file containing records of organized and related information.

Dial String -

A combined set of numeric and special characters used as the pager or modem dial number. The Dial String is the phone number and special characters that the KDA will use to dial out to master.

Displays -

Displays contain 64 points of data.

Docking Module -

Small plug-in circuit assembly that provides the electrical interface for a communications port. Available interfaces are RS232, RS422/485, 202 Modem (for dedicated line) and 212 Modem (for dial line).

DOS Path -

This is the DOS search path used to find specified directories on specified drives.

Download -

The act of transferring a configuration file from a computer to the KDA. Can be done remotely via the dial port (modem), if equipped, or locally via the craft port.

DTMF -

The abbreviation for Dual Tone Multi-Frequency. This is a common touch tone telephone.

Expansion Card -

Accessory card that fits into a slot at the right side of the KDA chassis. Adds additional functions to the KDA, such as Analog Channels, TBOS Ports, Control Points, Discrete Alarm Points and ASCII Serial Ports.

General LCD Display (GLD) -

A unit providing remote alarm point descriptions. Time Stamp KDA versions 1.7 and above will support up to 3 General LCD Displays (GLDs).

Hexadecimal -

A numbering system having a range from 0 to F .

Interface -

The electrical standard used by a data transmission port (RS232, RS422, RS485, 202 Modem, RJ11 etc.)

LED -

The abbreviation for Light Emitting Diode. The LED is used as an indicator of activity.

Live Alarms -

Live Alarms are indicated by a display of the number of standing alarms on the system.

Modem -

The abbreviation for Modulator/Demodulator. Modems are used to transfer data over telephone lines.

Optically Isolated -

Electrical interface, such as a discrete alarm point input, that isolates the external circuitry from the internal circuitry of the KDA with an optical coupler. Optical Isolation reduces the possibility of electrical mis-match or interference between the KDA and the alarm sources.

Point -

The smallest unit on the line that can be monitored. It is therefore an alarm in itself.

Polarity -

The polarity of a point can be either Normal (NRM) or Reverse (RVS). Normal polarity is current flow in a closed circuit for an alarm.

Primary Pad -

Location of the docking module for the primary communications port. The Primary communications port will be used by the KDA to report all alarms, unless it is unequipped. If the Primary port fails to communicate properly, the KDA will switch to the secondary pad, if equipped. (see Docking Module)

Protocol Analyzer -

A diagnostics mode in which the absolute hex bytes (hexadecimal), going to and from a particular channel, are displayed.

@SUBHEAD II = Qualification Time -

The Qualification Time is the amount of time an alarm must stand in an alarm state before the KDA will perform an action.

Rebuild Key Files -

This function rebuilds index key files that are associated with the data files.

RTS

The abbreviation for Request To Send.

RTU -

Remote Telemetry Unit. An RTU is a device that gathers alarm inputs and communicates them to a master alarm station.

Satellite -

Additional KDA units at the same location and communicating with the master through a base KDA. Up to three satellites can be associated with a base KDA. Using satellites expands the use of a remote address, allowing greater system capacity.

Secondary Pad -

Location of the docking module for the secondary communications port. The Primary communications port will be used by the KDA to report all alarms, unless it is unequipped. If the Primary port fails to communicate properly, the KDA will switch to the Secondary pad. The Secondary pad is normally the location of the dial-up modem, if equipped. (see Docking Module)

Stop Bits -

The trailing bit(s) in a byte of data that indicate the end of a transmitted byte in RS232 communications.

String -

A combined set of characters.

TBOS -

Telemetry-Byte-Oriented-Serial protocol. A well-established alarm system protocol used by many telco-oriented manufacturers. Normally embedded in switches, channel banks and other equipment with many alarm points. TBOS normally uses an RS422 serial port. A port has a capacity of 512 alarm points, divided into 8 displays of 64 points each.

Timeout -

A timeout action indicates a time limit was exceeded.

T/MonXM -

DPS interrogating master.

T/KDA -

Configuration software for the KDA.

Toggle -

A process of switching back and forth from one mode to another. The enabling and disabling of switches and settings.

Traffic -

Activity on the line or channel.

Upload -

The act of transferring a configuration file from the KDA to a computer using T/KDA software. Can be done remotely via the dial port

(modem), if equipped, or locally via the craft port.

Window -

Depending on the context, the term window can refer to an alarm monitoring widow or to a special mode window.

Wire-Wrap -

Wire connection points using a steel post that the connecting wire is wrapped around using a special tool. Wire-wrap is a fast and compact method of making lots of connections. It is commonly used on the KDA for all inputs and outputs, except on connectorized units.

(See Connectorized.)

Word Length -

A communication port attribute that indicates how many bits are in a byte. Typically is 8.

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NOTES

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